

2006 Fall Meeting
AGENDA (draft)
30-31 October 2006
Hilton Financial District, San Francisco, CA

Monday, 30 Oct. 2006

8:00am **Morning refreshments**

8:30am Meeting introduction / logistics / goal / ARM status (Alapaty ~ 10 minutes, Wiscombe ~ 5 minutes; Klein ~ 5 minutes)

Tropical Convection

8:50am Application of a stochastic cloud-radiation parameterization in the TWP (Dana Veron)
9:10am Lagrangian diagnostics of tropical deep convection and its effect upon upper tropospheric humidity (Akos Horvath and Brian J. Soden)
9:30am The effect of microphysics on cumulus convective clouds dynamics: Large eddy simulations based on RICO data using bin microphysics model (Yefim Kogan and David Mechem)
9:50am Applying a shallow cumulus parameterization to deep cumulus convection - progress and potholes. (Chris Bretherton and Eecho Jung)

10:10am - 10:30am Break

TWP-ICE

10:30am TWP-ICE overview and initial results (J. Mather)
10:50am Satellite retrievals of cloud ice water for TWP-ICE (G. Liu)
11:05am Analysis of radar precipitation and surface turbulence fluxes for TWPICE (T. Hume)
11:15am Status of TWP-ICE forcing dataset (Xie)

Tropical Convection Wrap-Up

11:30am Discussion (led by Del Genio)

- *What is the analysis plan for TWP-ICE?*
- *What scientific problems can be addressed with TWP-ICE?*

- *How is ARM addressing the data needs for convection science?*
- *What scientific analyses are missing?*

12:00pm – 1:30pm Lunch

ARM Future Observing Plans

- 1:30pm Presentation and discussion of the AVA plan (Kollias ~15 minutes, Clothiaux ~15 minutes, Discussion ~20 minutes)
- Please read the AVA plan (will be available on the WG webpage) and come with questions and thoughts for the discussion.*
- 2:20pm 2009 Precipitation IOP Proposal (Kollias)
- 2:35pm Update on 2007 CLASIC IOP (Berg)

2:50pm – 3:20pm Break

Potpourri

- 3:20pm Microphysics of Autoconversion Parameterization (McGraw and Y. Liu)
- 3:40pm Evaluation of SCM cloud simulations using ARM SGP observations (B. Xi)
- 4:00pm ARM LES Testbed (ALT) plan (Albrecht)
- 4:20pm Further development of the constrained variational analysis method to incorporate data uncertainties (M. Zhang)
- 4:40pm Presentation and discussion of ARM SGP observational strategy: How many Extended Facilities are needed? (Xie)

5:00pm Adjourn

Tuesday, 31 Oct. 2006

8:00am Morning refreshments

M-PACE Case Study

- 8:30am Overview of Case Study and First Results (Klein)

M-PACE Observations

- 9:00am Updates on Vertical Profiles of Microphysics from M-PACE (McFarquhar)
- 9:30am Remote Sensing Data (Clothiaux and Verlinde ~ 15 minutes; de Boer ~ 15 minutes)

10:00am NASA-Langley mixed-phase cloud products derived from MODIS data during M-PACE (Doug Spangenberg)

10:15am – 10:45am Break

M-PACE Model Results

10:45am Ice properties of boundary layer clouds during M-PACE: LES model results and implications (Fridlind)

11:05am Heterogeneous freezing parameterizations in the ECHAM5-HAM global aerosol-climate-model: Application to M-PACE single column model studies (Hoose and Lohmann)

11:25am Modeler Free-for-All

Modelers are welcome to bring up to 2 ppt slides pointing out some key issues or points related to the intercomparison that they wish to bring to the attention of the group.

12:10pm – 1:30pm Lunch

M-PACE Case Study (continued)

1:30pm Discussion (Fridlind & Klein)

- *Do we know how ice is nucleated/formed in the M-PACE cases? Are there multiple microphysical solutions that yield consistency with the observation?*
- *What are the science goals that are achievable with the intercomparison? What are the next steps for the intercomparison? Do we need greater consistency in the aerosol specifications (i.e. CCN activity, Ice nuclei)? Do we need offline microphysical intercomparisons? Or further synchronized sensitivity studies?*
- *What are the roles of other physical properties/parameterizations (turbulence/shallow convection)?*
- *If we think we understand the Arctic stratus at some point, does that understanding translate to wintertime freezing rain over the US, or midlatitude supercooled liquid altocumulus behind a cold front? Does that then suggest an SGP winter IOP?*

2:20pm ISDAC 2008: Overview and Discussion (Ghan)

- *What lessons were learned from M-PACE that help us with planning this experiment? What new (e.g. vertical velocity & water vapor) or better (aerosol & ice nuclei) measurements are needed? What science*

questions remain unanswered from M-PACE that can be addressed in ISDAC?

2:45pm – 3:15pm Break

Other ARM Business

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| 3:15pm | Presentation and discussion of the AAVP plan (McFarquhar) |
| 3:35pm | Overview and discussion of the ARM measurement status (Liljegren) |
| 3:55pm | Overview and discussion of the ARM VAP development (Turner) |
| | <ul style="list-style-type: none">• <i>Is the VAP process meeting the data needs for modelers?</i> |
| 4:15pm | Discussion of “Focus Groups” (Wiscombe) |
| 4:35pm | Meeting Wrap-up and Discussion of Action Items (Klein / Xie) |

5:00pm Adjourn